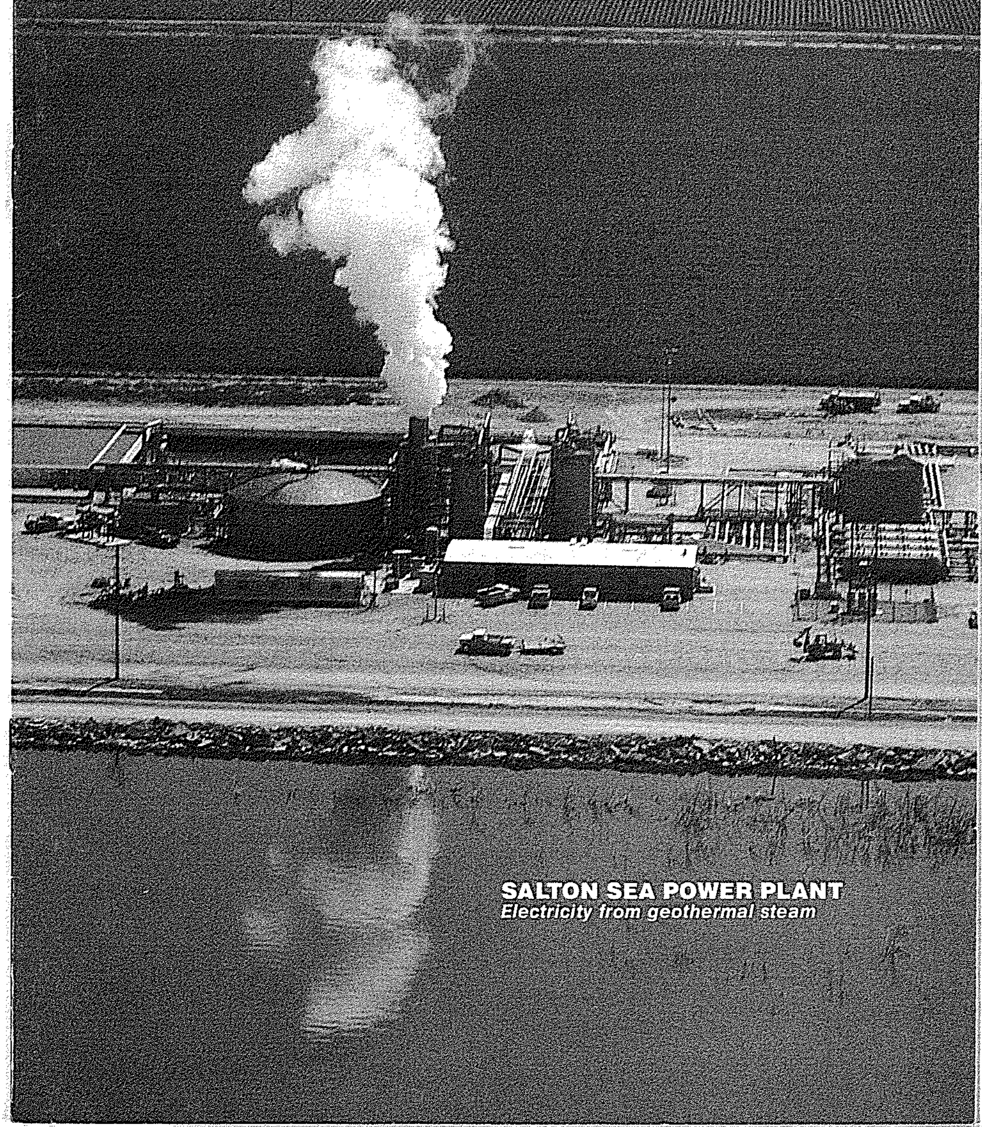
Southern Pacific Bulletin
October 1982



SALTON SEA POWER PLANT
Electricity from geothermal steam

SOUTHERN PACIFIC BULLETIN
Volume 66, Number 8
October 1982

COVER

Clean, white steam rises from the new steam generating plant owned by SP Land Company, Union Oil Company of California and Mono Power at the shores of the Salton Sea in southeastern California. Southern California Edison's adjacent power plant uses the steam to generate electricity for 9,200 people in the Imperial Valley. See story on page 3. Photo: Sergio Ortiz, Union Oil Company of California.

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News Notes

SP Communications To Be Acquired By GTE Corporation

GTE Corp. and Southern Pacific Company reached an agreement on October 1 for GTE to acquire all the stock of SP's communications and satellite subsidiaries for approximately $750 million.

The agreement, which was approved by the boards of directors of both companies, is subject to preparation and execution of definitive documents and various government approvals and filings. The companies expect the acquisition will be consummated by mid-1983.

SP Communications President Dale F. Pilz said, "We believe that the acquisition will enhance our ability to speed up network expansion and, as well, strengthen our competitive position within the telecommunications industry." Pilz went on to say that company business will continue in normal fashion.

SP Communications' principal product, SPRINT®, is a nationwide long distance telephone service. Headquartered in Burlingame, California, the company increased its revenues by more than 50 percent to $231 million in 1981, and has reported revenues totalling $161 million for the first half of 1982.

Benjamin F. Biaggini, Chairman and Chief Executive Officer of SP, said, "Southern Pacific Communications Company, which has developed Sprint and Spacenet, began operations in December, 1973. The proposed sale puts this modern telecommunications company in good hands and provides Southern Pacific a generous return on its original investment. Net results of the sale will be to reduce Southern Pacific's outstanding long term debt by about $200 million and provide it with about $700 million in cash for future investment."

The acquisition will mark GTE's entry into the expanding and increasingly competitive intercity telecommunications industry presently dominated by AT&T's long lines division.

SP Communications has approximately 2,300 employees and currently serves some 425,000 business and residential customers. Its microwave network extends over 46 million circuit miles and reaches into virtually every major city in the continental U.S.

Both GTE's satellite subsidiary and the Southern Pacific Satellite Co. (Spacenet) plan to launch their first satellites in 1984. They will provide transmission facilities for diversified telecommunications users as well as expand existing microwave capacity to reach to areas of the country not presently served.

GTE is a worldwide leader in developing, manufacturing and marketing telecommunications and electronic and electrical products, services and systems, with operations in 39 states and 18 countries abroad.

The company also is engaged in advance research and development work in such high-technology areas as fiber optics communications, satellite communications, digital systems, micro electronics and packet switching. Combined GTE revenues and sales for 1981 totalled over $11 billion. ☐

SP Appeals Decision By ICC to Approve UP-MP-WP Merger

Southern Pacific has filed notice that it will appeal the Interstate Commerce Commission's decision to approve the consolidation of the Union Pacific, Missouri Pacific and Western Pacific Railroads.

SP filed the notice with the U.S. Court of Appeals in Washington, D.C. on September 13 following the announcement that the ICC intends to decide in favor of the combination by October 20.

Southern Pacific continues to strenuously oppose the merger on the grounds that it will destroy railroad competition in the West. It also opposes the merger because the UP-WP affiliation is illegal under the Pacific Railroad Acts of 1862 and 1864, which constitutes a contract between the government of the United States, Union Pacific and Central Pacific (the predecessor of SP) specifying that the first transcontinental railroad be operated as "one continuous line without discrimination of any kind contrary to the interests of the other" partner. ☐

An SP Land Company Joint Operation Harnesses

Clean Energy from the Earth's Core

Last July, the Southern Pacific Land Company (SPLC), Union Oil Company of California and Mono Power, a subsidiary of Southern California Edison, began selling steam for generating electricity to a Salton Sea power plant.

The steam's commercial production marks a breakthrough in technology for accessing geothermal power. It is captured from magma-heated fluids drawn from 3,000 to 6,000 feet below the floor of the Imperial Valley through geothermal production wells near Niland in southeastern California.

Magma is rock melted by the heat of the earth's core. In some regions of the world, magma has worked itself relatively close to the surface, transmitting heat to layers of rock above it. If the rock layers are saturated with fluid, then steam or hot fluid is created. Geothermal energy can be harnessed by drilling wells into these zones, much as is done for oil.

Natural steam has been used in Italy to generate electric power since World War I, but people elsewhere were slow to follow the example of the Italians. Not until 1960 did Magma Power Company and Pacific Gas and Electric tap a dry steam geothermal field at The Geysers in Sonoma County 90 miles north of San Francisco for commercial production of electricity.

The Geysers produces clean, dry steam, ready for use. However, dry steam fields are a rarity, and hot fluid geothermal fields are more common. Producing geothermal energy in the Imperial Valley involves bringing hot underground fluids to the surface under pressure, separating steam, sending the fluids back down into their underground reservoir and disposing of waste by-products.

The main challenge with the fluids under the Imperial Valley came from their

GEOTHERMAL RESOURCES COUNCIL TRANSACTIONS
RESOURCES COUNCIL TRANSACTIONS

Photo: Bob Morris

Erik Stenstedt (left), manager for special energy projects, and William Oesterling, manager mineral and energy resources, are the Southern Pacific Land Company's experts on geothermal energy advances in the Imperial Valley and the West.

The Imperial Valley's potential as the "Saudi Arabia of geothermal energy" is being tapped, thanks to successful experiments with hot brine from thousands of feet below the ground.

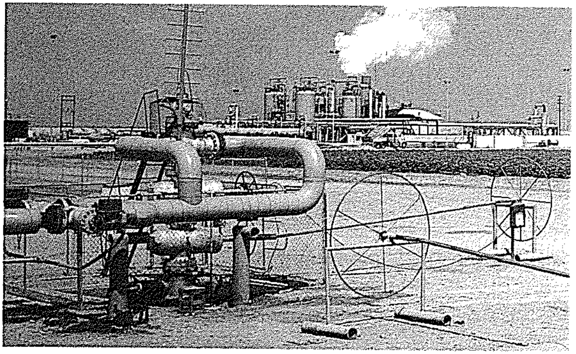


Photo: Steve Baker

Above: This geothermal well—one of eight serving the new Salton Sea steam generating plant in the background—brings hot brine under pressure from thousands of feet below the ground. At right: The nerve center of the steam generating system, this control panel schematically displays operating conditions at the plant and allows technicians to control brine flow.

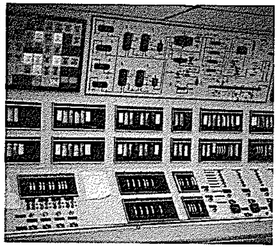


Photo: Steve Baker

salinity. Twenty to 25 percent of their weight is dissolved salts and minerals. Previous attempts to produce the fluids, called brine, have led to corroded or scaled (blocked up) pipes and valves.

The triumph of the SPLC, Union Oil and Mono Power research and development project is a technology for harnessing the heat energy in this brine. Union Oil, which owns 50 percent of the venture, manages and operates the steam generating system, but it was SPLC, a 25 percent owner, which took the first step to this advance back in the early 1970s.

At that time, the SPLC leased the geothermal resources on the projects 30,000-acre site. The Imperial Valley was not then known as the "Saudi Arabia of geothermal power," nor did many people suspect that its floor might cover an energy resource equivalent to more than five billion barrels of oil.

What's new—and exciting—in the Imperial Valley today is a system that generates steam in spite of the highly saline waters. Problems overcome include development of:

1) Methods to use corrosion-resistant metals to minimize damage to subsurface well casings.

2) Techniques which precipitate minerals out of the waters to prevent deposits or scaling in above ground equipment.

3) Procedures for reinjecting the fluids into the reservoir.

The geothermal production wells are from 3,000 to 6,000 feet deep. Under pressure, they bring brine at about 450 degrees Fahrenheit to surface steam separators where the pressure is reduced and a portion of the brine flashes into steam.

From the top of the horizontal 20′-by-6′ separator, the steam is drawn off into pipelines at a pressure of 400 pounds per square inch. At a second lower pressure tank, steam is collected at 120 pounds per square inch. All steam, except for a small portion which escapes into the atmosphere, is piped to Southern California Edison's nearby turbine electric generator where 10,000 kilowatts of power are being produced. That's enough power to serve a community of 9,200.

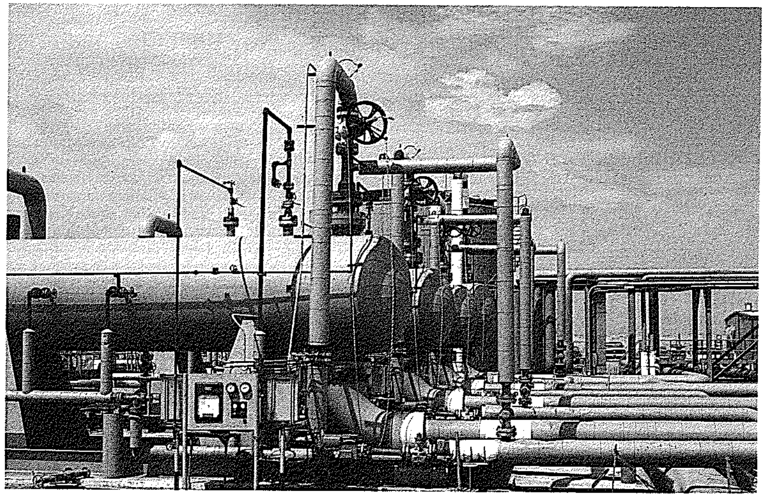


Photo: W. F. Herbert

At reduced pressures, hot brine flashes to steam in these steam separators and then moves through pipes to Southern California Edison's turbine generator to be converted into electricity.

The cooled brine next passes through crystallizer and clarifier tanks on its way back to its underground reservoir. In these tanks, most solids are precipitated out of the fluids. The cleaned brine is then injected into the reservoir through special injection wells.

Geothermal wells can produce fluids for power production at many areas of the world, most of them near fault lines. There are many potential sites along the Pacific Rim and in Nevada; quite a few are on SP land.

In nature, the typical site might look like one of the hot springs thirsting early settlers staggered by in Hollywood movies.

Where wagon trains once searched for fresh water, today's geothermal prospector now hunts for hot springs. Not a grizzled sort traveling on foot with a burdened burro at his heel, today's prospector is a geologist in a four-wheel drive vehicle or a small airplane. His eyes are peeled for an amorphous white substance deposited by a mineral spring.

The more silica in the deposit, the better—hotter—the water in the spring system is likely to be. Temperatures of the subsurface rock at differents depths in shallow 200- to 300-foot drill holes tell the geologist whether or not deep test wells are worthwhile. So far, the Imperial Valley has shown the most potential.

As owner or lessee of land and as co-developer and part-owner of state-of-the-art geothermal energy production technology, SPLC is playing a role in easing the energy crisis. Geothermal energy has the potential to be a competitive and clean source of power. Its development and use will encourage less reliance on finite resources like gas and oil for generation of electricity.

That's good news for Southern Pacific —and for people everywhere. ☐

Around the System

Bronze 'Smokey' Awarded to the Oregon Division

The Oregon Division has earned a Smokey Bear Award because of its record in right of way and forest fire prevention. Railroad-related fires have dropped 50 percent during the last 12 years with a 95 percent decline in the amount of acreage burned due to prevention efforts.

Southern Pacific is only the fourth railroad to receive this bronze statuette award from the Cooperative Forest Fire Prevention Committee, an organization representing the National Association of State Foresters and the U.S. Department of Agriculture Forest Service.

Fires along a railroad right of way come from sparks from engine exhaust or braking, signal flares, welding and careless employees or trespassers. SP uses careful maintenance and operating procedures to minimize the mechanical factors, and employees take precautions against fire while working in forest fire and range areas. During the months when the fire hazard is high, trains are equipped with fire fighting equipment.

Denman McNear, SPTCo chairman and chief executive officer, accepted the award on behalf of the Oregon Division, but credited SP people throughout the division with actually earning it. He singled out A. W. Kilborn and Larry Phipps, respectively past and present superintendents of the Oregon Division; Regional Engineer Wayne Ferguson; and Area Engineer Bob Engelbert.

McNear also credited Bob Andre, hazardous commodities control superintendent at San Francisco. For the last eight years, the hazardous commodities control staff has shared its expertise with local fire departments and other emergency response agencies. SP has also donated its detailed computerized information on hazardous materials control to local fire departments with compatible computer equipment. ☐

Photo: Steve Bloch

Showing off the "Smokey" awarded to the Oregon Division are (left to right): Denman McNear, SPTCo chairman and chief executive officer; Larry Phipps, superintendent of the Oregon Division; and Wayne Ferguson, regional engineer.

PFE Offers Refund

As part of a campaign to increase market share in time for the Thanksgiving and Christmas holidays, Pacific Fruit Express is advertising $250 per carload refunds on shipments of lettuce, celery or table grapes in PFE or SPFE cars from October 1 through December 31.

Shippers are being alerted to this offer through advertising in *Packer* and *Produce News* magazines. PFE operates a fleet of about 4,500 mechanical refrigerator cars hauling fresh fruits and vegetables from western produce fields to markets across the country. ☐

Pine Bluff Citizens Host Retired Engineers

Cotton Belt steam locomotive #819, which was built in the Pine Bluff shops and is now on permanent display at a Pine Bluff city park, marked its 40th anniversary this past summer. The citizens of Pine Bluff chose this occasion to honor the retired Cotton Belt locomotive engineers who reside in the area.

More than 30 former railroaders, representing a cummulative total of 896 years of SSW service, gathered for the occasion on September 1. ☐

New Utah Coal Venture Brings Talk of Slurry Pipelines, Unit Trains

Southern Pacific Land Company and the Bishopsgate Coal Corporation have formed a joint venture partnership to develop, produce and market Utah coal as early as 1983. Bishopsgate, headquartered in Park City, Utah, has been designated managing partner.

O. G. Linde, president of SP Land Company, said the joint venture, which will be called Pleasant Valley Coal Partners, was formed to consolidate various property interests in the Carbon County areas of east-central Utah and to develop a major high-grade coal reserve. The partnership is owned 50 percent each by SP Land Company and Bishopsgate.

The partnership has acquired contiguous private coal lands and is continuing negotiations for other property in the district. If all acquisition efforts are successful, the partnership will control in excess of 180 million tons of coal, of which 157 million tons are considered mineable under current technology.

Describing the project to the Eighth Annual Conference of the Western Coal Transportation Association, SP Company Chairman B. F. Biaggini said, "The area to be developed holds high-quality steam coal which we expect to sell on both domestic and exports markets."

As a result, he said, "We contemplate seeing more and more unit trains of Rocky Mountain coal running to Northern California ports along SP lines for shipment to destinations across the Pacific Basin."

A Western Governors' Policy Office study projects that steam coal imports by the Far Eastern nations could reach 100 million tons by 1990, or almost as much as present total U.S. coal exports.

In addition to hauling coal by rail, Biaggini said SP "fully expects to eventually own and operate" other coal slurry pipelines. SP—the only company with first hand experience in coal slurry pipelines—owns and operates the 273-mile-long Black Mesa Pipeline.

The combination of railroad and pipeline experience has convinced SP that the decision on the best way to transport coal has to be made on a case-by-case basis, Biaggini said. He added that the "battle between coal slurry pipelines and unit train advocates is another squabble that has reached almost ridiculous proportions."

Black Mesa goes through a largely mountainous terrain, he said, and there was no existing railroad serving the route from the mine to power plant, so SP built the slurry pipeline in 1970.

"If there had been a railroad there," he said, "Black Mesa might have had scant economic basis for existence. Since construction of one system or the other was necessary, the coal slurry line proved to be the least expensive and most efficient way to go."

"Our experience with Black Mesa has been rewarding and Southern Pacific has studied other slurry proposals and will continue to do so," Biaggini said. "Where other opportunities develop like Black Mesa, we'll be interested in expanding our slurry operations." ☐

If You See That Red Light, Don't Shut the Locomotive Down

At 30 of SP's chilliest locations, enginemen and mechanics are keeping an eye out for a new red light before they shut down their locomotive engines. If they see its glow, they know it's so cold outside that they must leave their spotted engines idling.

Operating guidelines for fuel conservation permit locomotive engines to idle only when temperatures are below 35 degrees Fahrenheit. The problem was that accurate temperature readings were not readily available.

The new lights, which automatically turn on or off as temperatures fall or rise, were the idea of Dick Frederiksen, plant manager of the running locomotive maintenance plant at Roseville. Before the lights were installed (two in each location, in case one fails), enginemen had to call the weather bureau or the chief dispatcher to learn the temperature. ☐

William Eskew (right) succeeds Byron Smith as SP Pipe Lines president and general manager. The two have been with the pipeline since it was formed in 1955. In this photograph taken in 1980, they are shown presenting their 25th service anniversary pins to each other.

SPPL's Byron Smith Retires

William Eskew Appointed Head of SP Pipe Lines

Byron K. Smith, president and general manager of Southern Pacific Pipe Lines with headquarters in Los Angeles, retired recently after 27 years of service.

Succeeding Smith is **William T. Eskew,** former executive vice president.

Smith and Eskew are "charter members" of SPPL. Both joined the company in 1955—the year SP organized its pipeline subsidiary in Southern California.

Smith grew up in the town of Gonzales in the Cajun country of southern Louisiana. He attended Louisiana State University where he earned a B.S. degree in petroleum geology.

His early career in the petroleum industry was interrupted by World War II where he served in the United States Air Force as a navigator, guiding B-17s of the 8th Air Force on raids into Germany.

In 1955, after 10 years with Plantation Pipe Line Company of Atlanta, Georgia, Smith joined SPPL. While serving as assistant general manager, he helped complete SP's first pipelines running from the refining areas of southern California and El Paso to Arizona. Later, he guided the establishment of new distribution systems in California, Oregon and Nevada.

After serving as assistant to the president and vice president, he was appointed president and general manager in 1965.

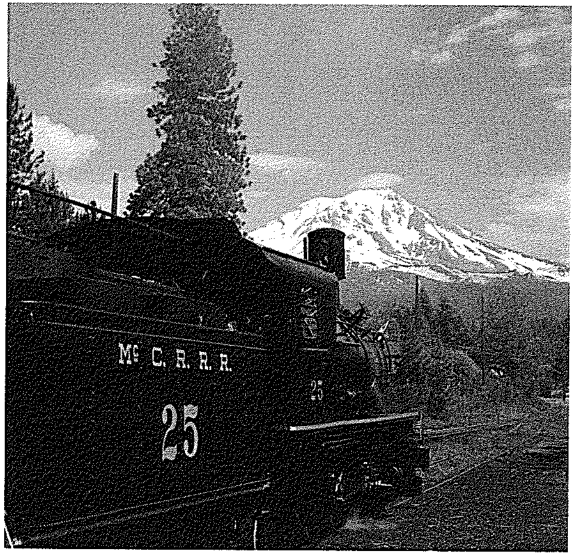
At his retirement dinner, SP Company President Alan Furth noted that "under Byron's excellent leadership, SP's pipelines have prospered. Black Mesa Pipeline, the only operating coal slurry pipeline in the world, went on-stream in 1970 under Byron's guidance. SPPL's total pipeline revenues have increased each year: from $7 million in 1956 to more than $100 million in 1982."

During Smith's 27-year career, some 3.4 billion barrels of refined petroleum products and 40 million tons of coal have moved through the lines—an impressive record to retire on.

Eskew, former executive vice president, succeeds Smith as president and general manager.

Eskew joined SPPL in 1955 after nearly nine years with Plantation Pipe Line Company. He has served as chief engineer, assistant general manager, manager of operations and engineering, vice president and recently, executive vice president.

A native of Anderson, South Carolina, Eskew is a graduate of Duke University with a degree in mechanical engineering. He is also a graduate of the Advanced Management Program at Harvard University. ☐



No. 25, a steam engine from the collection of the Great Western Railroad Museum in nearby McCloud, California, was brought in for the whistle blowing contest. Mt. Shasta, northern California's tallest peak, is in the background.

RAILROAD DAYS

Dunsmuir Celebrates Its Railroading Heritage

Photographs and Story by Jeff Glorfeld

The ties that bind together the past, present and future of Dunsmuir are railroad ties.

This northern California community of 3,500 residents is a railroad town—and proud of it. Its annual summer festival—Railroad Days—provides plenty of good times: river rafting, softball games, music, picnics and five railroad "events" such as spike driving, track laying, whistle blowing, knuckle changing and brake tying. It also recognizes the railroad's role in the growth and development of this town.

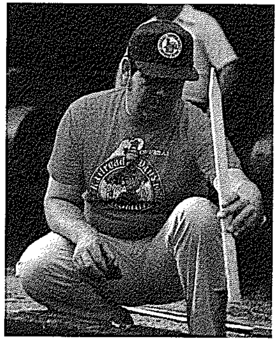
After the Central Pacific, SP's predecessor, built its rail line through the Sacramento river canyon in 1886, this spot was called Pusher—a reference to the helper locomotives that were needed to provide the additional power to move trains north over a long grade that passes near Mt. Shasta, a majestic 14,162-foot peak.

In late 1886, Alexander Dunsmuir, a coal baron from British Columbia, was returning to Canada aboard his private rail car when the train stopped at the nearby station of Cedar Flat. Dunsmuir was so impressed with the beauty of the area that he offered to build a fountain over one of the many springs "where drinking water could be brought right up to the face of the tired traveler." In return, he wanted the town named after him.

In January 1887, the fountain was erected alongside the tracks and Pusher changed its name to Dunsmuir. This important point on SP's main line served as the division headquarters for the Shasta Division. A machine shop, car shop, roundhouse and yard tracks were located here. Then in 1964, the Shasta Division was absorbed into the Sacramento and Oregon Divisions and many facilities were phased out. Today, SP has a much less noticeable presence in Dunsmuir, but town residents still feel a close association with the railroad.

In 1941 the people of Dunsmuir organized Railroad Days to renew the spirit of the town and to serve as a reminder of the area's railroading tradition.

The summer celebration has undergone name changes and interruptions, but the tradition lives on. World War II halted Railroad Days until 1947 and gradually the focus moved away from the railroad. In 1966 the celebration was renamed Canyon Days. That was replaced in 1972 with Railroad Days—but only for a year. In 1975, the Dunsmuir city council voted to establish the celebration as River Daze and it looked as if Railroad Days were over.



Larry Mahon, district MofW manager, sets up a spike for the spike driving contest.

Four years ago a group of people, including SP employees Richard Bigard and Larry Mahon, began a campaign to bring back Railroad Days. Last year their efforts were rewarded when the city council once again adopted Railroad Days.

Organizers worked to return the railroading theme to the celebration. Along with traditional railroad events, this year's Railroad Days, held June 17–20, featured a beauty pageant for children (the "Little Engineer Contest") and the first performance of the Dunsmuir Community Theater with a play entitled "Run to the Roundhouse Nellie."

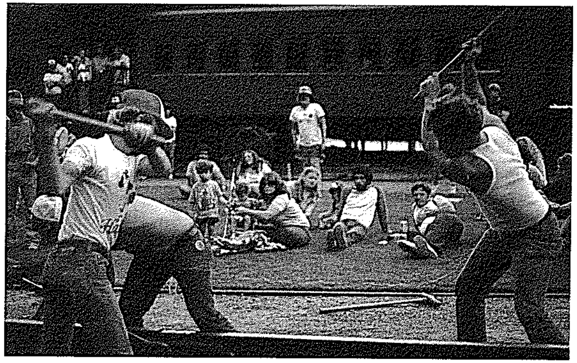
The highlight of the four colorful and event-filled days happened Saturday morning when "Number 25," a McCloud River Railroad steam engine built in 1925 and now part of the collection of the Great Western Railroad Museum, chugged into town from nearby McCloud, California.

Hundreds of people turned out to see the fully restored beauty make its entrance puffing smoke and blowing steam from the six whistles specially fitted for the whistle-blowing contest. It was a sight that many compared to the arrival of the Freedom Train when it came to Dunsmuir in 1976.

The spike driving and track laying competitions were held at Railroad Park, a recreation area located a few miles from Dunsmuir which features a fine collection of antique railroad cars.

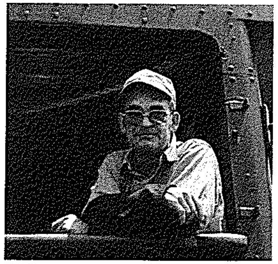
Nearly 200 spectators watched railroaders from northern California and Oregon demonstrate their skills. Even in these days of automated track laying, these skills are very much in use for track maintenance.

John Peterson, a section foreman from Dunsmuir, won the single spike driving contest by pounding a standard rail spike into a good oak tie in 2.19 seconds. Nick Diaz and Rick Burger, SP laborers from Redding, won the team spike driving with a time of 3.09 seconds. The team track laying event was won by Jose Lopez, Zeno Robinson, Diaz and Burger, representing Redding's SP unit. Lyle McGuire, an engineer from Dunsmuir, won an honorable mention in the whistle blowing contest on Old 25.



Jose Lopez (left) and Rick Burger (right) teamed up with Nick Diaz and Zeno Robinson (not pictured) to win the track laying event. All are track laborers from Redding.

Rich Bigard (left) helped revive the Railroad Days festivities. He's shown here with Jim Plank, road foreman of engines.

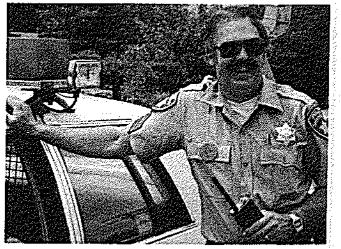


Locomotive Engineer Lyle McGuire of Dunsmuir received an "honorable mention" in the whistle blowing contest.

Bigard, a curb lubricator maintainer from Dunsmuir, was the person most responsible for the success of this year's railroad events. He singled out District MofW Manager Larry Mahon for his work in organizing the materials used in railroad events and for serving as judge in the events.

"We're already doing some preliminary planning for next year," Bigard said. "We want to invite all the railroads throughout the nation to compete in the railroad events—in other words, a railroad Olympics.

"We've had a very good response to this year's Railroad Days," he said. "We seem to be gaining more and more support each year. I think it would be a lot of fun, and a real boost to the town. Dunsmuir is a railroad town and SP has always helped us out a lot." ☐



Carey Mitchell, a sergeant for the SP Police, assisted with the crowds that turned out for the festival.

This Message Bears Repeating

Operation Lifesaver prevents accidents by continually reminding the public about the dangers of railroad-highway grade crossings.

If motorists obeyed all existing traffic laws, there would be no grade crossing accidents. Unfortunately, they don't. When rules are broken, the results are often deadly.

Public education programs to stimulate awareness of crossing dangers—the remedy that psychologist Dr. Herschel Liebowitz recommends in the accompanying article—is one of the "Three E's" that Operation Lifesaver stresses. The other two—enforcement of driving safety laws, and engineering for improved warning signs and signals—are also important to reducing grade crossing accidents.

SP works with national and state agencies, as well as other railroads, to help bring the Lifesaver message to the public. Talks, leaflets, posters, public service announcements, advertising and news coverage by the media alert drivers to the dangers of railroad-highway grade crossings.

But experience has shown that the public needs to hear about the dangers of railroad-highway grade crossings again and again to reduce fatalities. The Operation Lifesaver program in Kansas is a good example.

Jim Bearden (center), assistant manager-employee safety at Houston, is shown with four locomotive engineers who have talked to nearly 10,000 students in Houston area schools. Left to right: Rodney Stutes, Ken Williams, Bearden, David Shelton and W. H. Schroder.

In 1974, Kansas was the third state in the nation to promote grade crossing safety through Operation Lifesaver. At that time the program consisted of a highly concentrated, year-long campaign. At the end of the year, the program was discontinued.

The statistics for the three year period, 1973–75, demonstrated the effectiveness of the Lifesaver campaign, but also revealed that the public needs to be reminded about these dangers year after year. Kansas experienced 33 grade-crossing deaths in 1973. In 1974, when the program was underway, accidents dropped by 33 percent. However, in 1975, Kansas' grade crossing deaths rose to 36—more than before the program.

Kansas re-established its Operation Lifesaver program this year. And like the campaigns in most other states, it will be a continuing program.

An effective way of getting across the Operation Lifesaver message is to hear it first hand from railroaders. Operating employees—especially locomotive engineers who have been involved in accidents or near misses—SP police officers and public relations representatives serve as Operation Lifesaver spokesmen around the system. On the Cotton Belt, Locomotive Engineers Gene Thompson and John Courts of Illmo, Missouri and Scotty Reddin and Don Puckett at Pine Bluff, talk to groups that range from preschool age youngsters to senior citizens.

In California, the Operation Lifesaver committee is currently focusing its campaign on student drivers and enforcement of crossing laws.

"We've Got to Stop Meeting Like This" is the title of a filmstrip developed with the California State Department of Education and which was distributed to driver education classes.

In two northern California communities, a pilot program is underway to stress local enforcement of crossing safety laws. In cooperation with the San Mateo County Police Chiefs Association, police officers at Menlo Park and San Carlos are making special grade crossing patrols to cite motorists, cyclists and pedestrians who ignore flashing lights or go around lowered gates. Locomotive engineers identify trouble spots through near-miss reports and some are being invited to ride along with the police officers during the special patrols.

According to the Association of American Railroads, 1967 was the year that highway-railroad crossing deaths reached an all-time high. Today, fatalities have been reduced by 50 percent. Operation Lifesaver, with the cooperation of railroads like SP and the participation of its employees, has made the life-saving difference. ☐

Fatal Races with Trains . . . Why?

Nearly 1,000 people die in the United States each year when their cars are hit by trains at grade crossings. Dr. Herschel Liebowitz, a psychologist at Pennsylvania State University who has been studying such cases, recalls one victim, an elementary school principal.

With five childen in her car, the woman was driving on a road that passed through a completely flat field. "The railroad crossing had a standard warning sign," Liebowitz says, "and the train approached with its lights on and its whistle blowing.

"People in cars behind saw the woman slow down and brake, indicating that she saw the train. Then, she abruptly drove onto the crossing. The slaughter was terrible."

Liebowitz, an authority on visual perception, has concluded that most such drivers are "rational people with full use of their senses." In many cases, however, he believes they misjudge the oncoming trains because they fail to recognize several ways in which their perceptions can deceive them.

Track signals, Liebowitz explains, "are designed so that warning lights and bells are activated for the fastest train, the slowest driver and the worst weather." This warning time is excessive for most drivers, and many of those who decide that it is safe to cross do make it.

Some of those who do not, Liebowitz says, may be misled by the fact that larger objects appear to move more slowly than smaller ones.

"We see this in airports," says Liebowitz. "Although all jets have roughly the same approach velocities, the larger aircraft appear to be travelling more slowly."

Other victims may mistake the speed of the oncoming train because they make the assumption—understandable, but incorrect—that a particular train is going no faster than other trains they have seen.

In still other cases, people may have been lulled into the habit of ignoring grade crossing signs by the practice of leaving signs in place along abandoned tracks.

More generally, Liebowitz says, research has shown that "the perceived risk of an event is related to its frequency. We tend to ignore infrequent events and assume that they won't happen, no matter how much danger they represent."

Liebowitz's remedy is "public education, involving . . . driver educators, licensing authorities, traffic officials and railroad managers."

An effective campaign to make drivers more aware of their own foibles at grade crossings, says Liebowitz, "could go a long way to preventing some of the senseless loss."

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Elko Bypass Uses Concrete Ties

Thanks to a federally sponsored project, both SP and the Western Pacific are moving their main lines at Elko, Nevada to a new transportation corridor south of the city. The re-routing will eliminate 17 grade crossings in Elko's downtown core. Work began last summer and is expected to be complete early next year.

To track experts in the Engineering Department, the project is a test of concrete ties. Along 3.7 miles of SP track, 10,300 concrete ties are being laid; SP is making up the difference in cost between concrete and timber—about $35 per tie.

The WP line—only 20 feet away from the SP main line—will have timber ties.

Although Canadian railroads are systematically converting their main lines to concrete ties, U.S. railroads have been slow to follow suit because of the great expense and the questionable benefits of concrete ties. SP engineers feel more experimentation is called for.

Concrete ties cannot be installed without a total modification of spacing and fastening of ties as well as a deepening and rebuilding of subgrade and ballast. When railroads have tried to mix timber and concrete ties along main line track, the difference in tie dynamics has made the concrete ties wear out too quickly to warrant the expense of their purchase.

At Elko, the federal demonstration project calls for all new construction and brand new ribbon rail.

Weather at Elko provides extremes of temperature to test the two kinds of ties, and the right of way is both curved and tangent (straight), providing different kinds of wear. With the same weather, stresses, age and approximately the same traffic levels on each line, the bypass will minimize variables and provide almost laboratory conditions for comparing concrete and timber ties.

Traffic levels are practically the same because of an unusual paired track agreement between SP and the WP. The agreement calls for trains from both companies to run west on SP track and east on WP track between Weso and Alazon, Nevada, a stretch that goes through Elko.

SP engineers are optimistic about concrete ties. Earlier tests near Roseville, California and Caldwell, Texas are showing concrete ties to be more economical to maintain than timber in the long run. They have an anticipated lifespan of 50 to 60 years, compared to 30 years for timber ties.

The bypass—or Railroad Demonstration Project—is budgeted at $42 million, of which 95 percent will come from federal funds. Important other purposes of the project are to show how a bypass can relieve vehicular congestion in downtown areas, improve railroad operations, eliminate train-vehicular accidents and open downtown areas to commercial investment. The project is part of a federal program known as Project Lifesaver. ☐

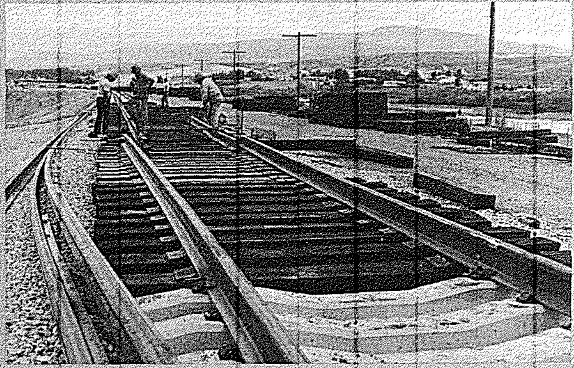
Photo: Elko Daily Free Press

Both timber and concrete ties are being installed on the new bypass at Elko, Nevada. Concrete ties are used on the main line, except for switches which subject ties to uneven stresses and cause concrete ties to break.

Meet Five SP People Who Hold Political Office and Are

Making Local Government Work

In the American political system, the power and the glory go to national leaders: the people who make decisions on foreign affairs, the economy and the destiny of the nation.

But in terms of numbers, more Americans are active on the local level with decisions on sewers, waterworks, schools, police services and community development.

Many local office holders do their government work at low or no pay, in their spare time and while holding full-time jobs. They serve because of a sense of responsibility and a desire to influence their communities for the good. Besides, once they get involved, community service seems to get into the blood.

Meet four SP people who have been elected to local office and a fifth in an appointed position.

Jim Davenel is bridge and building supervisor at Ennis, Texas. Down the main line from Ennis is Garrett, where Davenel serves as mayor.

During the 1880s, Ennis and Garrett competed to be the local railhead. Ennis won and today has a population of about 12,000. Garrett has a population of 220 and recently lost its school and post office.

But Garrett is making a come back under Mayor Davenel's leadership. A 51-acre parcel zoned for residential development is being annexed, and $325,000 in federal loans and grants have been received to improve and expand the city's sewer system. With annexation, Garrett and Ennis will touch borders.

Davenel's relationship with his five-person city council is excellent. In fact, he's married to a councilwoman. The ugly issue of nepotism might be raised in a large community, but in Garrett, Sylvia and Jim Davenel are both welcome in city government. He is also a volunteer fire fighter.

The political experience has taught Davenel a lot. He's learned about acquiring federal grant and loan money (and about red tape). He's learned about the political process (and that you can't please everyone). He's learned that there's a lot of satisfaction in serving his community.

Hundreds of miles to the west, **Herb Collins,** equipment installer in the Communications Department, is one of eight people on the Lordsburg, N.M. (pop. 3,200) city council.

Collins was elected in 1980 by a two-to-one margin on a reform slate dedicated to better maintenance and expansion of city services. His wife, Patricia, shares his interest in politics and attends almost all council meetings, even when Collins can't himself.

Lordsburg is on a high desert plateau (elevation 4,250 feet), and wells are the city's only water source. Collins is dismayed at the $100,000 price tag on a new well and wishes that federal money were more readily available to Lordsburg.

The reform slate has improved the city's parks and has established zoning regulations aimed toward attracting industry. The mayor and city council are hoping to bring in a manufacturing operation which could take advantage of an industrial site near either the SP main line or a spur but which wouldn't use a lot of water.

Jerry Pera, community relations representative at San Francisco, is the president of the five-member Board of the Coastside Water District as well as the former mayor of Half Moon Bay, Calif. The District is a 30-square mile area stretching along 15 miles of coastline just south of San Francisco.

As president, Pera serves as the District's executive officer, signing documents and expressing the Board's official views to the public. The Board meets monthly to handle complaints on water quality, vote on permits, set water rates and make decisions on finance. In the last five years, planning expansion of the District's water supply has taken much of the Board's attention.

Pera is trying to earn the public's support for a pipeline to regional reservoirs. He's commissioned a draft environmental impact report and presided at public hearings on the 8-mile, $8-million proposal.

Photo: Elizabeth Krajca

Jim Davenel, mayor of Garrett, Texas.

Photo: J. R. Alsher

Herb Collins (standing), councilman at Lordsburg, N.M. with Mayor Steven Hill.

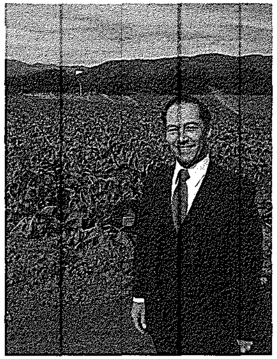

Photo: Steve Bloch

At left: *Jerry Pera, Coastside Water District president.* **Below:** *Dwayne Moore, Oregon Job Task Force appointee.*

Until the pipeline is in place, Pera says, the people who would like to move into the District will be out of luck. The existing water system is at capacity, and a "heat wave" of four or five days of 80 degree weather would mean water rationing. The Board is not issuing any water permits for new homes or businesses, and yet residential lots in the area are being sold for over $70,000.

In Portland, where **Dwayne Moore,** regional manager for Southern Pacific Industrial Development Company (SPIDCo) works, there's an abundance of water, but a shortage of jobs.

Oregon Governor Vic Atiyeh has appointed Moore to the Oregon Job Climate Task Force. Moore served as chairman of the Task Force's Industrial Development Subcommittee.

The Task Force looked at both new and old economic information in new ways and came up with recommendations on land use planning, labor laws and taxation. For example, the Task Force recommended a state sales tax as something prospective employers would welcome to lessen the tax burden on corporations and property owners.

Through the Task Force, his membership on other state, county and city economic development committees and his position with SPIDCo, Moore concentrates on economic development almost all the time.

Moore believes lumber will never be as big as it was in the 1970s, and like many Oregonians, he hopes economic diversification will come soon. Moore's trying to change Oregon's image for industrial development.

New businesses attracted to Oregon will benefit SP as well as state residents. When Moore can locate any new industries on rail-served sites along SP lines, he has done a service to both the state he lives in and the company he works for.

Davenel, Collins, Pera and Moore all deal with issues of growth in their spare time political work, but there's a lot more to local government than sewers, parks, waterworks or even economic development. There's also law enforcement.

Jim Hall of Dalhart, Texas is a Cotton Belt locomotive engineer full-time and an elected county constable in his spare time. He works with the local sheriff's office to serve papers, following up on traffic code violators and people who owe money on small claims verdicts.

Hall carries a gun, but Kojack he's not. He seldom is involved in criminal investigations. But he can tell you something Kojack would never have known: that it's more frightening to see a vehicle race his train to a crossing than to be in a high speed chase down the highway in a Hartley County police car. He's done both.

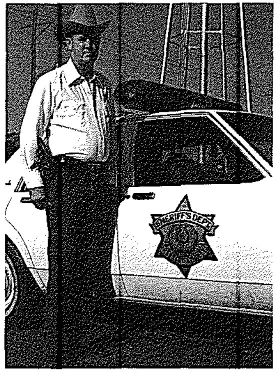
Photo: James Ricketts

SHERIFF'S DEPT.

Jim Hall, Hartley County, Texas constable.

What does this willingness to serve mean?

About 150 years ago, Alexis de Tocqueville, a French aristocrat, toured the United States and made an extensive record of his observations. His main focus was the effect of equality and individualism on American institutions. He saw that free local political institutions taught individualistic Americans how to work together for community goals and fostered the desire to serve.

From this local leadership, Tocqueville saw develop the habits of association, political freedom and, when transferred to the economic realm, commercial enterprise.

It's nice to know that the American spirit Tocqueville admired 150 years ago is alive in SP people today. ☐

Holder

Phelps

SP Pipe Lines

Dale D. Holder has been appointed senior vice president of the Executive Department of Southern Pacific Pipe Lines, Inc. (SPPL).

Holder joined SPPL as an engineer in 1968 after two years in the U.S. Army. He has served the company in a number of other key positions, including most recently assistant to the president and earlier as general superintendent.

Holder received a mechanical engineering degree from the University of Texas in 1965 and a Master of Business Administration from the University of Southern California in 1972. □

Public Relations

Lewis M. Phelps has been named vice president-public relations for Southern Pacific Company. He will be responsible for all public relations and advertising matters for Southern Pacific Company and its subsidiaries.

Before joining SP, Phelps was public relations director for the Norfolk Southern Corporation, a holding company formed in June following the affiliation of the Norfolk & Western Railway Company and the Southern Railway Company.

Prior to June 1, Phelps served as director of public relations and advertising for Norfolk & Western. He was based in Roanoke, Virginia.

Phelps was a staff reporter for the *Wall Street Journal* before joining Norfolk & Western in 1975. He covered transportation and labor matters in Chicago from 1969 to 1975, and worked in the San Francisco bureau from 1965 to 1966.

He left the *Wall Street Journal* for three years and served as a U.S. Navy officer from 1966 to 1969.

Phelps, a graduate of Pomona College in California, is an accredited member of the Public Relations Society of America and a former vice president of the Railroad Public Relations Association. □

Medley

Jones

Operating Department

D. K. (Dave) Medley has been named superintendent of the Houston Division. He will supervise train operations over more than 1,240 miles of railroad in south and southeast Texas.

Medley joined the railroad in 1954 as a switchman at Oakland, Calif. He became a yardmaster at Oakland in 1963 and two years later moved up to assistant trainmaster.

In 1972 he was named assistant terminal superintendent at East St. Louis, followed by terminal superintendent three years later. He served two years as superintendent of the Alton & Southern Railway at East St. Louis. In 1978 he was appointed terminal superintendent at Pine Bluff, Ark. In 1981 he was made assistant division superintendent at Dallas, the position he held prior to his present assignment. □

Governmental Relations

Wiley N. Jones has been named assistant vice president—governmental relations in Washington, D.C.

Jones, senior legislative assistant to Sen. Russell B. Long, D-La., since 1974, joined SP September 1.

From 1973-1974, Jones served as legislative assistant on the House Rules Committee for Rep. Gillis Long, D-La., and from 1971-1973 he was in the U.S. Air Force as an intelligence officer in Southeast Asia and as a briefing officer at Strategic Air Command headquarters in Omaha, Nebraska.

He received a bachelor's degree from Louisiana State University, a master's from the Univ. of Maryland, and a law degree from Columbus School of Law, Catholic Univ. of America in Washington.

Jones is a member of the United States Tax Court, the American Bar Association's Committee on Taxation, Maryland State Bar Association and District of Columbia Bar Association. □

Appointments

ACCOUNTING DEPARTMENT: At San Francisco: **N. F. Jeffers** *to assistant to controller;* **V. K. Wise** *to assistant controller—budgets and analyses.*

INDUSTRIAL RELATIONS DEPARTMENT: At San Francisco: **L. C. Chapman** *to manager of personnel services;* **T. P. Cox** *to supervisor of personnel services;* **Ms. C. P. Murphy** *to assistant supervisor of personnel services.*

LAW DEPARTMENT: At Reno: **Lawrence W. Bennett** *to assistant tax commissioner.*

MECHANICAL DEPARTMENT: At San Francisco: **R. T. Lenz** *to assistant chief mechanical officer—car.*

SOUTHERN PACIFIC LAND COMPANY: At San Francisco: **Ms. M. K. Jarrett** *to lease administrator;* at Sacramento: **W. B. Curtis** *to district manager.*

TRAFFIC DEPARTMENT: ***Pricing and Market Planning:*** At San Francisco: **B. C. Nadeau** *to manager, administration;* ***Automotive:*** At Detroit: **J. E. Farr** *to automotive equipment and service manager;* **M. W. Johnson** *to account manager—automotive.*

Pricing: At San Francisco: **Ms. J. E. Atkins** *to pricing analyst;* **J. D. Augustine** *to pricing analyst;* **Ms. G. J. Bailey** *to data analyst;* **S. C. Bishop** *to pricing analyst;* **J. G. Breen** *to asst. general manager—pricing—intermodal;* **Ms. J. E. Cotton** *to assistant manager—special projects;* **Ms. M. Dimech** *to data analyst;* **M. J. Escovy** *to pricing analyst;* **F. A. Holland** *to pricing analyst;* **M. C. Kennedy** *to manager data analysis;* **R. R. Kottke** *to asst. general manager—pricing (grains, food products, perishables);* **Ms. C. Mittelsteadt** *to data analyst;* **E. E. Portwood** *to asst. vice president—special projects;* **M. K. Spaulding** *to manager—pricing administration;* **A. W. Tracy, Jr.** *to pricing analyst;* **B. E. Transano** *to senior general manager—pricing (task force).*

Market Planning: At San Francisco: **R. C. Abreu** *to senior manager—market development—chemicals;* **A. D. Andersen** *to asst. manager—market development—energy;* **G. E. Anderson** *to manager—market development—metals and ores;* **B. P. Bair** *to senior manager—market development—foot products and perishables;* **R. P. Beroza** *to assistant manager-market development—automotive;* **J. F. Ellebracht** *to manager—market development;* **W. L. Ferguson** *to service manager (Southwest);* **R. S. Goerss** *to competitive analyst;* **T. P. Guilfoy** *to manager—market development—automotive;* **E. R. Hughes** *to general manager—market development;* **G. V. Hunter** *to manager—market development—construction materials;* **J. R. Joyce** *to manager—market development;* **J. W. Kamola** *to senior manager market development—automotives;* **A. J. Kielty** *to senior manager—market development—forest products;* **M. King** *to senior manager—market development—metals and ores;* **Ms. C. L. Rang** *to manager—competitive analysis;* **T. W. Rolland** *to manager—market development—energy;* **F. L. Sanders** *to senior manager—market development—consumer products;* **M. R. Whitlock** *to market share analyst;* **C. J. Wilcomb** *to assistant manager—market development—automotive.* At Los Angeles: **R. W. Torassa** *to manager—market development—perishables.*

Sales: At San Francisco: **F. L. Chaidez** *to staff assistant;* **J. Lubimir** *to general manager—intermodal sales;* **R. R. Milne** *to manager—intermodal sales—domestic;* **Ms. C. A. Scoles** *to manager—sales administration;* **C. R. Wong** *to manager-program development;* **R. C. Zimmerman** *to manager—sales systems.*

At Beaumont: **Ms. J. A. Upchurch** *to sales representative;* at Chicago: **G. K. Higuchi** *to manager intermoldal sales;* **F. T. Kearns** *to manager sales administration;* **T. E. Wilson** *to staff assistant;* at Cincinnati: **J. P. Ward** *to sales representative;* at Cleveland: **G. P. Dalton** *to account executive;* at Colton: **F. E. Fontana** *to sales representative;* at Detroit: **C. R. Jones** *to senior sales representative;* at Houston: **T. P. Griffith** *to account executive;* at Los Angeles: **J. S. Butler** *to regional manager intermodal sales—domestic;* at Minneapolis: **W. J. Roman** *to sales representative;* at Oakland: **F. T. Beckham** *to senior sales analyst;* **L. V. Henke** *to senior sales representative;* **J. L. Hovey** *to district sales manager;* **M. T. Lewis** *to sales analyst;* **W. H. Moore** *to manager sales administration;* **E. T. Rehnberg** *to senior sales representative;* at Pittsburgh: **L. F. Peters** *to sales representative;* at Portland: **T. A. Brueckheimer** *to regional sales manager;* **L. M. Montez** *to district sales manager;* at Salem: **W. M. Jackson** *to territory sales manager;* at San Jose: **L. E. Sutton** *to district sales manager;* at Vancouver, B. C., Canada: **J. J. Speight** *to district sales manager.*

Traffic Services—Mexico: At Nogales: **S. M. Baquet** *to export manager.*

Retirements

GENERAL OFFICE, SAN FRANCISCO: I. L. Arons, *assistant chief draftsman;* **V. A. Childs,** *telephone operator;* **R. J. Low,** *bookkeeper;* **M. M. Mello** *and* **M. R. Mickel,** *clerks;* **L. L. White,** *jt. fac. engineer.*

HOUSTON DIVISION AND REPAIR PLANTS: R. J. Armstrong, *telegrapher-clerk;* **J. W. Batts,** *carman;* **C. M. Bowser,** *forklift operator;* **M. C. Champion,** *electrician;* **R. Charles,** *machinist helper;* **A. O. Gleitz,** *draftsman;* **R. N. Godsey,** *signal maintainer;* **S. M. Gonzales,** *crane operator;* **H. D. Hemphill,** *oiler;* **E. Jenkins,** *oiler;* **J. S. Janecka,** *clerk;* **W. Kowich,** *engine foreman;* **V. Llorens,** *lead machinist;* **J. H. Maloney,** *clerk;* **W. G. Meadows,** *locomotive engineer;* **J. H. Plummer,** *machine operator;* **H. C. Robinson,** *machinist helper;* **C. D. Sifuentes,** *pipefitter;* **L. E. Sprinkle,** *foreman;* **A. A. Torres,** *machinist;* **C. M. Torres,** *welder.*

LAFAYETTE DIVISION: L. B. Baker, *car inspector;* **S. H. Beaver,** *conductor;* **O. P. Fung,** *locomotive engineer;* **J. F. Lindow,** *cashier;* **U. J. Melancon,** *clerk;* **G. Moore,** *agent-telegrapher;* **J. L. Zeno,** *laborer.*

LOS ANGELES DIVISION AND REPAIR PLANTS: M. M. Aguayo, *plumber;* **J. B. Aragno,** *mechanic;* **R. J. Barton,** *solicitation clerk;* **J. D. Brown,** *boilermaker;* **N. E. Carlson,** *car foreman;* **D. Cooke,** *car inspector;* **C. M. Dean,** *locomotive engineer;* **L. R. Franklin,** *conductor;* **G. B. Frias,** *clerk;* **J. Ferri** *and* **S. R. Garcia,** *machinists;* **J. M. Gravett,** *locomotive engineer;* **G. E. Halverson** *and* **A. M. Halvorsen,** *electricians;* **L. Harris,** *motor truck operator;* **G. O. Hendrickson,** *conductor;* **J. A. Hernandez,** *grinder operator;* **P. C. Hernandez,** *track laborer;* **R. Hernandez,** *laborer;* **D. C. Howe,** *carpenter;* **T. A. Lackey,** *machinist;* **D. E. Lennon,** *sheetmetal worker;* **J. W. Lenz,** *locomotive engineer;* **A. C. Luna,** *lamp tender;* **F. R. Martinez,** *lift truck operator;* **A. J. Maya,** *car inspector;* **J. P. Montague,** *engine foreman;* **A. V. Murillo,** *track inspector;* **J. M. Neely,** *locomotive engineer;* **E. Ortiz,** *motor car operator;* **E. C. Powers,** *electrician;* **R. P. Ramirez,** *foreman;* **J. M. Rocha,** *sheetmetal worker;* **G. V. Sanchez,** *car inspector;* **C. A. Stein,** *freight agent;* **C. H. Tangen,** *conductor;* **A. S. Tellechea,** *train clerk;* **C. J. Thomas,** *car service clerk;* **J. D. Zoscak,** *brakeman.*

OREGON DIVISION: B. Bertsch, *truck driver;* **K. A. Burbidge,** *locomotive engineer;* **E. D. Burckhardt,** *welder;* **L. A. Purmort,** *train dispatcher;* **J. S. McClory, J. L. Vandarwarka** *and* **E. G. Williams,** *machinists;* **R. R. Wheeler,** *conductor.*

SACRAMENTO DIVISION AND REPAIR PLANTS: A. Asgur, *painter;* **R. W. Beech,** *boilermaker;* **E. F. Blankenship,** *carman;* **J. W. Bradley,** *locomotive engineer;* **W. E. Broderick,** *conductor;* **R. R. Carle,** *electrician;* **V. E. Dains,** *switchman;* **G. E. Dawson,** *machinist;* **E. T. Eldridge,** *locomotive engineer;* **I. Esquibell,** *laborer;* **M. D. Fisher,** *clerk;* **F. S. Galvan,** *carman;* **R. E. Hansen,** *machinist;* **H. J. Kley,** *conductor;* **O. A. Koop,** *cashier;* **A. Lopez,** *laborer;* **R. N. Madsen** *and* **R. J. Marchese,** *carmen;* **L. M. McAvoy,** *steno-clerk;* **A. N. Navarro,** *laborer;* **R. Ortiz,** *carman;* **V. F. Parks,** *conductor;* **F. C. Peralta,** *laborer;* **C. W. Rambo,** *traveling mechanic;* **W. E. Robinson,** *clerk;* **B. D. Rodriguez,** *track laborer;* **S. C. Rodriguez,** *machine operator;* **A. D. Root,** *fork lift operator;* **M. Santana,** *welder;* **H. Veasman,** *machinist;* **A. Vega,** *laborer;* **C. W. Wagner,** *clerk;* **J. P. Zuniga,** *machinist.*

SAN ANTONIO DIVISION: J. C. Alvarez, *laborer;* **W. Bass,** *messenger;* **A. R. Bostic,** *locomotive engineer;* **R. A. Cooper,** *machinist;* **N. W. Henkes,** *yardmaster;* **F. Johnson,** *clerk;* **I. Jones,** *laborer;* **M. R. Martinez,** *car inspector;* **J. B. Mitchell,** *porter;* **J. R. Percival,** *locomotive engineer;* **D. Pullin,** *carpenter;* **H. A. Saathoff** *and* **T. C. Tanner,** *engine foremen;* **E. M Tschirhart,** *brakeman;* **R. M. Williams,** *diesel mechanic;* **J. A. Yeager,** *machinist.*

SAN JOAQUIN DIVISION: J. W. James, *track walker;* **R. E. Kirchner;** *assistant engineer;* **S. G. Martinez,** *welder;* **A. Ruppel,** *secretary;* **D. L. Stewart,** *locomotive engineer;* **W. P. Wasoski,** *claims inspector.*

TUCSON DIVISION: C. D. Alexander, *brakeman;* **M. G. Bialk,** *clerk;* **S. M. Blank,** *conductor;* **F. Y. Contreras,** *locomotive supplyman;* **J. A. Heath,** *locomotive engineer;* **T. F. Nance,** *wire chief;* **J. L. Nava,** *locomotive supplyman;* **J. L. Saulsberry,** *locomotive engineer;* **E. G. Shula** *and* **S. R. Webb,** *conductors;* **D. A. Williams,** *locomotive engineer.*

WESTERN DIVISION: J. H. Avendano, *clerk;* **K. E. Bassett** *and* **F. R. Bates,** *switchmen;* **L. D. Beezley,** *brakeman;* **W. G. Bellamy,** *machinist;* **E. Cooper,** *janitor;* **H. W. Cissner, B. E. Cox** *and* **K. Elston,** *locomotive engineers;* **J. F. Espana,** *welder;* **P. M. Fuentes,** *machine operator;* **D. E. Hardy,** *steno-clerk;* **F. T. Jefferson,** *clerk;* **J. J. Llanos,** *instrumentman;* **W. A. Lund,** *demurrage clerk;* **E. M. Martinsen,** *cable splicer;* **G. Meinecke,** *conductor;* **G. R. Morrow, K. L. Podesta** *and* **M. A. Siebe,** *clerks;* **J. J. Schiopen,** *draftsman;* **A. L. Thompson,** *conductor;* **S. Ulversoy,** *machinist;* **N. E. Venable,** *brakeman.*

COTTON BELT: ***Pine Bluff Division:*** **A. V. Allen** *and* **J. D. Atkins,** *conductors;* **J. M. Bates,** *clerk;* **C. Booker,** *machine operator;* **W. D. Glaspie,** *locomotive engineer;* **M. P. Harvey,** *clerk-steno;* **C. E. Lee,** *switchman;* **T. T. Johnson** *and* **J. Moore,** *laborers;* **R. H. Powers,** *yard clerk;* **H. E. Russell,** *chief clerk;* **D. M. Wilson,** clerk; **H. E. Wooley,** *chief clerk.* ***Kansas City Division:*** **D. L. Dunham,** *mechanic;* **B. R. Ford,** *clerk;* **R. E. Hightower,** *machinist;* **E. L. Prince,** *locomotive engineer.*

OTHERS: T. M. Moss, *laborer and* **J. L. Ong,** *motor car repairman, both with Northwestern Pacific.*

Deaths

DALLAS DIVISION: Pensioner: K. H. Cox, *locomotive engineer.* .

GENERAL OFFICE, SAN FRANCISCO: E. C. Rogers, *transportation associate;* **A. W. Smith,** *systems analyst.* **Pensioners: M. Bryce,** *traffic service clerk;* **C. L. Coleman,** *file & utility clerk;* **E. Daniels,** *cook;* **E. E. Elkins,** *lounge car attendant;* **J. B. Howard,** *senior cashier;* **E. M. Jones,** *clerk;* **M. G. Payne,** *calculator operator;* **F. A. Penn,** *claims agent;* **M. Porter,** *operating statements clerk.*

HOUSTON DIVISION AND REPAIR PLANTS: R. G. Mayer, *machine operator;* **L. R. Mills,** *switchman.* **Pensioners; E. Amie,** *motor truckman;* **W. G. Battle,** *mail porter;* **C. Bledsoe,** *car inspector;* **R. E. Burkett** *and* **H. N. Haskins,** *locomotive engineers;* **W. Easter,** *carman helper;* **A. Lindsay,** *water service helper;* **P. C. Lloyd,** *assistant head clerk;* **C. L. Mechler,** *motor car repairman;* **E. M. Noble,** *conductor;* **A. Roescher,** *ticket clerk and relief agent;* **L. E. Satterwhite,** *laborer;* **C. L. Stafford,** *locomotive fireman;* **M. Stroter,** *file clerk;* **B. Tate,** *engine foreman;* **N. E. Tilton,** *machinist;* **D. Todd,** *agent-telegrapher;* **W. Williams,** *laborer;* **T. J. Wright,** *section foreman.*

LAFAYETTE DIVISION: P. J. Falcone, *switchman;* **F. L. Rideau,** *porter;* **A. M. Taylor,** *OS&D clerk.* **Pensioners: L Fontenot,** *bridge tender;* **G. Grand,** *electrician;* **P. A. Lilly** *hostler;* **W. T. McGee,** *laborer;* **J. E. Powell,** *assistant claim clerk.*

LOS ANGELES DIVISION AND REPAIR PLANTS: D. R. Blocker, *brakeman;* **R. J. Johnson,** *locomotive carpenter;* **J. W. Ward,** *assistant chief yard clerk.* **Pensioners: W. B. Baker,** *machinist;* **S. T. Blair** *and* **H. L. Cullum,** *locomotive engineers;* **D. I. Campbell,** *switchman;* **S. A. Carone,** *foreman;* **W. F. Duncan,** *painter;* **E. J. Dittes** *and* **E. G. Enslen,** *machinists;* **W. W. Fortner,** *senior zone accounting clerk;* **R. C. Girtch,** *brakeman;* **F. G. Gruber,** *clerk;* **E. R. Hamilton,** *machinist;* **L. E. Haymond,** *locomotive engineer;* **M. D. Hearne,** *fireman;* **E. Hoagland,** *car inspector;* **T. R. Hughes,** *carpenter;* **C. M. Hunsaker,** *switchman;* **B. G. Jones,** *train dispatcher;* **R. A. Kewish,** *substation operator;* **G. M. Ladesich,** *car foreman;* **C. E. Lamphier,** *motor car mechanic;* **A. C. Lenon,** *locomotive engineer;* **E. A. Little,** *switchman;* **R. Luna,** *carman;* **L. G. Magallanes** *and* **H. H. Mahle,** *machinists;* **F. P. Marsh,** *electrician;* **J. E. Martin,** *water service foreman;* **E. L. Nielsen,** *conductor;* **F. Radisch,** *machinist;* **J. L. Rodriquez, M. Romero** *and* **C. Rush,** *laborers;* **T. A. Russell,** *locomotive engineer;* **J. A. Sonoqui,** *car inspector;* **C. M. Stottlemeyer,** *electrician;* **T. R. Taylor,** *switchman;* **H. M. Terhune,** *locomotive engineer;* **G. M. Velez,** *machinist;* **W. Wilson,** *extra baggage clerk;* **W. L. Woolcox,** *agent.*

OREGON DIVISION: A. V. Bertolucci, *conductor;* **J. W. Evans,** *manager;* **W. L. Shrum,** *yardmaster.* **Pensioners: E. J. Armbruster,** *clerk;* **C. E. Avery,** *carman;* **R. L. Balch,** *foreman;* **C. H. Baughman,** *conductor;* **W. R. Brittain,** *brakeman;* **J. M. Brown,** *car foreman;* **A. R. Clow,** *conductor;* **F. S. Friar,** *B&B foreman;* **J. L. Goens,** *car inspector;* **R. L. Johnson,** *clerk;* **M. E. Leder,** *laborer;* **F. W. Merrithew,** *crew dispatcher;* **A. E. MacMillan** *and* **H. W. Parks,** *conductors;* **F. Y. Padilla,** *reliefman;* **A. F. Parsons** *and* **W. L. Poole,** *brakemen;* **M. M. Rowell,** *telegrapher-clerk;* **I. L. Smith** *and* **E. A. Spalinger,** *locomotive engineers;* **C. G. Thoming,** *clerk;* **J. W. Wimer,** *conductor;* **D. A. Zamarripa,** *section foreman.*

SACRAMENTO DIVISION AND REPAIR PLANTS: S. Bishop, *pipefitter;* **C. E. Burgdorf,** *signalman;* **S. S. Delrio,** *track laborer;* **H. K. Holliday,** *roundhouse supervisor.* **Pensioners: L. L. Cook,** *conductor;* **L. E. Drysdale,** *welder;* **D. F. X. Fox,** *telegrapher;* **C. E. Gage,** *gang foreman;* **G. M. Gomes,** *lift truck operator;* **C. R. Grundy,** *signal maintainer;* **C. S. Hagge,** *locomotive engineer;* **G. G. Hanks,** *water service mechanic;* **J. G. Heinitz,** *B&B painter;* **W. Larkin,** *conductor;* **F. P. Lucini,** *car inspector;*, **F. D. Martin,** *car foreman;* **Q. J. Martinelli,** *pipefitter;* **S. J. Messina,** *carman;* **H. P. Nelson,** *brakeman;* **G. Paolini,** *machinist helper;* **B. D. Pekinpaugh,** *carman;* **M. J. Perry,** *boilermaker-welder;* **E. V. Phillips,** *helper;* **A. W. Rock,** *relief outfit foreman;* **F. W. Schilling,** *conductor;* **F. Signori,** *freight loader;* **A. B. Soriano,** *laborer;* **A. M. Souza,** *machinist;* **S. C. Streit** *and* **J. C. Tyler,** *carmen;* **J. Vanacore,** *head claims inspector;* **R. H. Vermilion,** *agent-telegrapher;* **H. C. Wallace,** *conductor;* **S. J. Williams,** *machinist;* **T. Williams** *and* **S. Yankovich,** *machinist helpers;* **J. C. Young,** *train dispatcher;* **M. A. Zabala,** *laborer.*

Correction

In 1897 while Mark Twain was in Europe, a newspaper article appeared which reported his death. Upon hearing the news, Twain fired off a telegram to set the record straight. It read: "The reports of my death are greatly exaggerated."

The *Bulletin* received similar responses about a number of employees who were incorrectly listed in the "Deaths" column for September. They have, in fact, only retired—not gone to heaven.

The Editor apologizes for the error. To set the record straight, the following employees recently retired:

HOUSTON DIVISION: **W. A. Ellis,** *switchman,* **W.W. Johnson,** *carpenter;* **H. G. Roberts,** *chief yard clerk.*

LAFAYETTE DIVISION: **D. J. Johnson,** *locomotive engineer.*

LOS ANGELES DIVISION: **H. T. Earl,** *claim inspector;* **R. N. Jump,** *locomotive engineer;* **H. F. Playter,** *engine foreman;* **A. J. Rogers,** *car foreman.*

OREGON DIVISION: **W. J. Banta,** *conductor;* **H. O. Looney,** *conductor;* **J. C. Oliver,** *switchman,* **M. O. Snortland,** *locomotive engineer;* **W. B. Sears,** *conductor;* **B. W. Wilson,** locomotive engineer.

SAN ANTONIO DIVISION: **C. C. Babb,** *conductor;* **R. G. Nichols,** *locomotive engineer;* **J. L. Taylor,** *conductor.*

SAN JOAQUIN DIVISION: **J. E. Crumpley** and **D. W. Roberts,** *locomotive engineers;* **R. L. Welker,** *laborer;* **G. A. Meyer,** *conductor.*

TUCSON DIVISION: **L. J. Hinkle,** *conductor;* **S. N. Osborne,** locomotive engineer.

WESTERN DIVISION: **R. W. Illing,** *engine foreman;* **S. Quintero,** *laborer;* **W. E. Watson,** *engine foreman.*

COTTON BELT: **C. J. Arasim,** *equipment installer;* **V. R. Cruse,** *locomotive engineer;* **R. K Glover,** *foreman;* **A. F. Heffington,** *carman.*

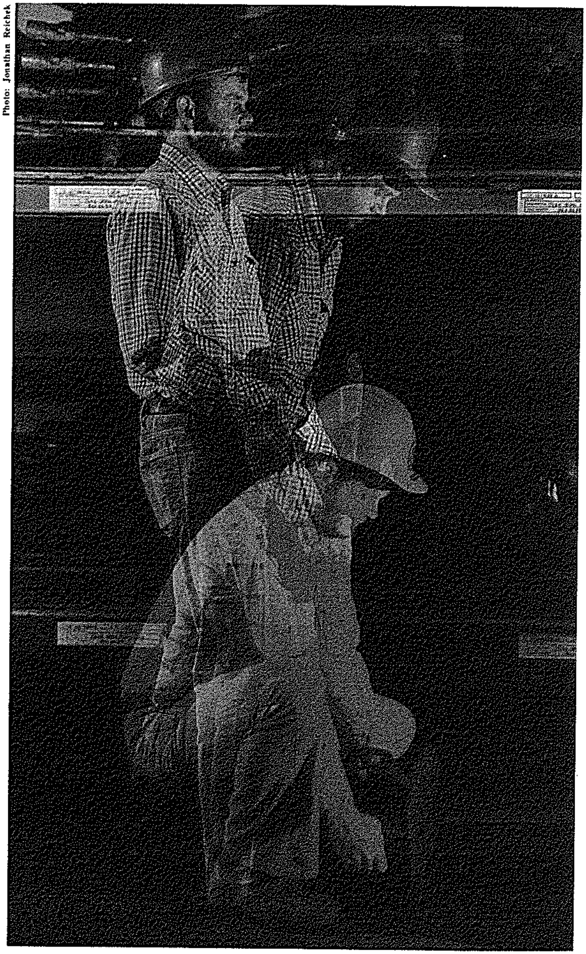

Photo: Jonathan Reichek

SIX STEPS
TO A *SAFE* LIFT

It's not so much the size or weight of the object you lift, it's how you use your body. Whether you're at home or at work, injuries—especially to your back—are easily prevented if you follow the six steps to a safe lift. In this triple exposure photograph Richard Bailey, materials foreman in the Purchasing and Materials Department in Oakland, demonstrates how your body becomes a perfect lifting unit using the six steps.

1. Feet apart with one foot alongside the object being lifted and one behind.

2. Back straight, nearly vertical. Remember that *straight does not mean vertical*. A straight back keeps the spine, back muscles and organs of the body in correct alignment. It minimizes the compression of the abdomen that can cause a hernia.

3. Chin tucked in. This helps keep the spine straight and firm.

4. Grip with the whole hand. Fingers alone have very little power.

5. Elbows and arms tucked in. Keep the object close to the body to use your maximum strength and power.

6. Body weight directly over feet. Start the lift with a thrust of the rear foot and keep your back straight as you lift up.

The six steps to a perfect lift should be used every time you pick up an object—whether you're at work or at home.

Southern Pacific Bulletin
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San Francisco, CA 94105

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